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THE NATURE AND VALUE OF TEACHER VERBAL FEEDBACK.

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TO INVESTIGATE MODES OF VERBAL FEEDBACK EMPLOYED BY TEACHERS AND THE EFFECTS OF VARIOUS TYPES OF FEEDBACK ON STUDENTS, TAPE RECORDINGS OF A CURRENT EVENTS DISCUSSION LESSON IN EIGHT 3D-GRADE AND SEVEN 6TH-GRADE CLASSES WERE ANALYZED BY JUDGES. FROM TRANSCRIPTS OF THESE LESSONS, TEACHERS RATED THE ACCEPTABILITY OF PUPIL RESPONSES. FROM SEGMENTS OF THE TRANSCRIPTS, PUPILS RATED THE ADEQUACY AND THE EMOTIONAL EFFECTS ON THEM OF THE TEACHER'S FEEDBACK BEHAVIOR. THROUGH THE USE OF A 25-CATEGORY FEEDBACK INSTRUMENT (13 DIRECT-FEEDBACK, 11 INDIRECT-FEEDBACK, AND ONE MISCELLANEOUS CATEGORY), IT WAS FOUND THAT (1) 175 TYPES OF FEEDBACK WERE USED BY THE TEACHERS 16 OF WHICH WERE USED WITH FREQUENCY AND REGULARITY, (2) THE 16 TYPES WITH HIGH FREQUENCIES OF USE MOSTLY PROVIDED SIMPLE POSITIVE FEEDBACK AND RESPONSE AND LESSON-DEVELOPMENT FEEDBACK, (3) SEVERAL OTHER LESS-USED TYPES (SIMPLE NEGATIVE, ELABORATE, CLUE, EXPLANATION) PROVIDED CONSIDERABLE REINFORCEMENT-MOTIVATION AND CORRECTNESS INFORMATION AND ALSO A GREAT DEAL OF EXPLANATION AND DIRECTION INFORMATION. RESULTS INDICATED THAT (1) IMMEDIATE LEARNING MAY NOT BE A PRIMARY CONCERN OF THE TEACHER, THAT WHAT THE CHILD SAYS AND DOES DURING THE INTERACTIVE SITUATION MAY BE OF MAJOR IMPORTANCE, (2) DIRECT NEGATIVE, ELABORATE, CLUE, AND EXPLANATION FEEDBACK SHOULD BE USED MORE OFTEN, AND (3) TEACHERS SHOULD KNOW WHAT THEY INTEND FEEDBACK TO MEAN AND USE ONLY THOSE MODES THAT CONVEY THE INTENDED MEANING. THIS PAPER WAS PRESENTED AT THE AMERICAN EDUCATIONAL RESEARCH ASSOCIATION CONVENTION (NEW YORK, FEBRUARY 16-18, 1967). (AW)

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THE NATURE AND VALUE OF TEACHER VERBAL FEEDBACK

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The Problem

One of the behaviors which teachers constantly employ during the teaching-learning act is teacher verbal feedback. This behavior refers to those oral remarks of teachers which reflect on the adequacy or correctness of the pupil's solicited or initiated statements in relation to academic subject matter development. Theoretically, teacher verbal feedback is a significant behavior because of the effect it can have on pupil learning and system control. From teacher verbal feedback a pupil can acquire information relative to the effectiveness of his behavioral output, adjust and change his future output, and gain a measure of control over his behavior. This study sought to discover something of the actual value of teacher verbal feedback along with the prior concern of the nature of this phenomenon. The specific problems investigated were:

1. What types of verbal feedback do teachers use and how frequently do they use them?
2. Is there a relationship between teacher verbal feedback and the grade level of teachers and pupils?
3. Is there a relationship between teacher verbal feedback and the purpose of the part of the lesson in which the feedback occurs?
4. Is there a relationship between teacher verbal feedback and the type of solicitation made?
5. Is there a relationship between teacher verbal feedback and the teacher judged value of the response?
6. Of what reinforcement-motivation and cognitive information value are the various types of teacher verbal feedback?

Procedures

The design of the study consisted of obtaining and analyzing transcripts of tape recorded lessons to provide data concerning feedback use and relationships, and obtaining pupil perceptions of teacher verbal feedback to provide data relative to feedback value.

The subjects of the study were eight third-grade and seven sixth-grade teachers and their classes of pupils. One current events discussion lesson was taught by each teacher and recorded and transcribed by the investigator. The lessons, which were based on one issue of a current events magazine for each grade level, were divided into two parts: (1) a pre-reading or introduction-readiness discussion, and (2) a post-reading or development discussion.

To provide data concerning verbal feedback type usage the transcripts were analyzed with a twenty-five category feedback instrument developed by the investigator.[1] The instrument contained thirteen categories of direct feedback (1.0-8.0), eleven categories of indirect feedback (9.0-13.0), and one miscellaneous category. The sources used in its development were preliminary transcript analysis, previous interaction instruments and research findings, and laboratory learning research.

The transcript categorization procedure was to identify all teacher remarks that followed pupil remarks and to assign a category number to each part of the remark that represented a different feedback element. All transcripts were analyzed by the researcher. Observer agreement coefficients were computed, and an intrajudge coefficient of .96 and interjudge coefficients of from .69 to .90 established.

From this analysis feedback usage in general and feedback usage in relation to grade level and lesson purpose were determined. To determine the relationship of feedback to the other two variables other analyses were made. Teacher solicitations were classified according to four thought processes with the aid of a modified Aschner-Gallagher System.[2]

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[1] See attached list of instrument categories on page 7.

[2] M.J. Aschner et al., A System for Classifying Thought Processes in the Context of Classroom Verbal Interaction, Cooperative Research Project No. 965 of U.S. Office of Education (Urbana, Illinois: Institute for Research on Exceptional Children, University of Illinois, 1965).

Pupil responses were judged by the teachers themselves on transcripts of their lessons according to five degrees of correctness or acceptability.

Data concerning the reinforcement-motivation value and cognitive information value of the various types of feedback were secured with an instrument consisting of segments from the fifteen transcripts. Each segment contained a teacher solicitation, pupil response, and teacher feedback statement. For each feedback type in each segment pupils had to make four judgments. The judgments, which concerned feeling, correctness, explanation, and direction, were then used to ascertain feedback value.

In all analyses frequencies and percentages were determined. In addition, chi square was used to examine the significance of differences in feedback usage in relation to the four variables.

Results

The major results of the investigation were that the teachers possessed a wide range of feedback behaviors, but they only used a few types with frequency; the types of feedback the teachers used were dependent on many factors only one of which was the value of the pupil response; and the frequently used types of feedback did not provide as much reinforcement-motivation and cognitive information as did other types. Some of the specific results were the following:

1. Results concerning general feedback usage.
   a. In total 175 different types of feedback were displayed by the 15 teachers. Individually from 33 to 57 different types were displayed.
   b. Of the 175 different types, 16 types were used with frequency and regularity.[3] The remaining 159 types were used rarely.
   c. The 16 types with high frequencies of use mostly provided simple positive feedback and response and lesson development feedback.
   d. The remaining types of feedback with low frequencies of use contained direct negative, elaborate, clue, and explanation feedback.

[3] See attached table on page 8.

2. Results concerning feedback relationships.
   a. There were significant differences in the usage of 7 types of feedback between the two grade levels.
   b. There were significant differences in the usage of 8 types of feedback between the two parts of the lesson.
   c. There were significant differences in the usage of all 16 types of feedback among the four kinds of solicitations and unsolicited pupil remarks.
   d. There were significant differences in the usage of 13 types of feedback among the five kinds of teacher judged responses.

3. Results concerning feedback value.
   a. The 16 frequently used types of feedback provided some reinforcement-motivation and some correctness information, but little explanation or direction information.
   b. Other types of feedback with low frequencies of use which contained simple negative, elaborate, clue, and explanation feedback provided considerable reinforcement-motivation and correctness information and also a great deal of explanation and direction information.
   c. Of the frequently used types of feedback the teachers and pupils agreed on the meaning of 6 types and partially agreed and partially disagreed on the meaning of the other 10 types.

Given the limitations of this study, these results would seem to indicate that teacher verbal feedback during the interactive classroom situation is a comparatively rigid behavior, it is a complex behavior, and it is a behavior that is not as valuable as it could be.

Discussion

Several potential implications for instruction are suggested by the outcomes of this investigation. Two of these are an orientation to instruction and feedback type usage during instruction.

Few would dispute the assertion that the goal of instruction is pupil learning or behavioral change. The energy expended in the name of schooling is directed at that end. The results of this investigation indicate something surprising about instruction, however. They indicate that immediate learning may not be a primary concern of the teacher, that what the child says and does during the interactive situation may not be of major importance.

If immediate learning were of importance, it would seem reasonable to expect greater variety in feedback usage, a greater relationship between feedback and pupil response value, and widespread use of more valuable types of feeback.

Since learning is a goal of instruction, it would seem that pupils' immediate learning during the interactive situation should receive emphasis and concern, and teachers should consciously and purposely behave in ways that will aid it. Teachers should sincerely listen to and think about pupils' verbal behavior in the classroom. They should ask and permit questions of significance and provide feedback that gives information which enables the pupil to proceed and progress on his own.

The second possible implication, feedback type usage during instruction, deals with the types of feedback that perhaps should receive more frequent use and those that might profitably receive less frequent use.

One type of feedback which teachers should consider using more frequently is direct negative feedback. Pupils judged direct negative feedback as providing much more correctness information than indirect negative feedback, but as providing no more negative feeling than indirect negative feedback. This suggests that because direct negatives are informational, but yet do not cause overly strong emotional reactions, they can be a valuable teacher feedback behavior. Considerable psychological research attests to the value of direct negatives in laboratory learning.[4]

Another type of feedback that should be considered for greater use is elaborate feedback. Although teachers repeatedly used simple feedback, the pupils judged elaborate feedback as providing much more reinforcement-motivation and correctness information. When elaborate praise was used there was complete agreement on feeling and correctness information.

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[4]A. H. Buss et al., "Acquisition and Extinction with Different Verbal Reinforcement Combinations," Journal of Experimental Psychology, LII (1956), pp. 288-295.

Two other types of feedback that teachers should give thought to including in their feedback repertories are clue feedback and explanation feedback. Both of these types of feedback were judged by the pupils as being highly informational. They felt that one of the types of clues provided more direction information than any other type of feedback. The value of clues and explanations in laboratory learning is well established.[5]

The types of feedback which teachers should consider using less frequently are some of those that contain only indirect feedback without clues, or contain indirect feedback without clues in addition to repeating the answer approvingly. According to pupils' judgments these behaviors are neither informational nor reinforcing.

Besides making these changes in feedback type usage teachers should give thought to being more consistent in the situational use of all feedback behaviors. They should give thought to what they intend certain feedback behaviors to mean and then use them only when they wish to convey that meaning.

Perhaps a consideration of these suggestions along with continued research into the area which this investigation has merely dented will make teacher verbal feedback a conscious and powerful tool in promoting pupil learning during the interactive situation.

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[5]A.L. Irion and L.J. Briggs, Learning Task and Mode of Operation Variables in Use of the Subject-Matter Trainer, AFPTRC, Technical Report AFPTRC-TR-57-8 (ASTRIA Doc, No. AD 134252, October, 1957); and M.H. Trowbridge and H. Cason, "An Experimental Study of Thorndike's Theory of Learning," Journal of General Psychology, VLL (1932), pp. 245-248.

CATEGORIES OF TEACHER VERBAL FEEDBACK

1.0 Praise-confirmation
- 1.1 Simple praise-confirmation
- 1.2 Elaborate praise
- 1.3 Elaborate confirmation

2.0 Reproof-denial
- 2.1 Simple reproof-denial
- 2.2 Elaborate reproof
- 2.3 Elaborate denial

3.0 Praise-confirmation and reproof-denial

4.0 Positive answer

5.0 Negative answer
- 5.1 Negative answer repetition
- 5.2 Statement of correct answer

6.0 Positive answer and negative answer

7.0 Positive explanation

8.0 Negative explanation

9.0 Response extension: development
- 9.1 Response development solicitation without clues
- 9.2 Response development solicitation with clues
- 9.3 Response development statement

10.0 Response extension: improvement
- 10.1 Response improvement solicitation without clues
- 10.2 Response improvement solicitation with clues
- 10.3 Response improvement statement

11.0 Solicitation repetition: several answers
- 11.1 Several-answers solicitation without clues
- 11.2 Several-answers solicitation with clues

12.0 Solicitation repetition: one answer
- 12.1 One-answer solicitation without clues
- 12.2 One-answer solicitation with clues

13.0 Lesson progression: different topic

14.0 Miscellaneous feedback

TABLE I

FREQUENCIES AND PERCENTAGES OF USE OF THE SIXTEEN MOST FREQUENTLY OCCURRING TYPES OF TEACHER VERBAL FEEDBACK

Feedback type[a]	Frequency	Per cent
4.0-13.0	183	8.46
9.1	179	8.28
1.1-13.0	168	7.77
1.1-4.0-13.0	125	5.78
13.0	110	5.09
1.1-11.1	101	4.67
4.0-9.1	100	4.63
4.0-9.3-13.0	95	4.39
4.0-11.1	73	3.38
9.3-13.0	64	2.96
1.1-4.0-11.1	63	2.91
1.1-9.3-13.0	61	2.82
1.1-4.0-9.3-13.0	52	2.41
11.1	51	2.36
1.1-9.1	49	2.27
10.1	47	2.17
Total 16 types	1521	70.35
Total 175 types	2162	100.00

[a]The titles of the categories which comprise the feedback types are: 1.1, simple praise-confirmation; 4.0, positive answer; 9.1, response development solicitation without clues; 9.3, response development statement; 10.1, response improvement solicitation without clues; 11.1, several-answers solicitation without clues; and 13.0 lesson progression different topic.